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(54) MOLD POWDER FOR CONTINUOUS CASTING

(57)Abstract:

PROBLEM TO BE SOLVED: To prevent the growth of a slag rim developed near a meniscus in a mold copper plate by adding a heat expansive graphite whose vol. at the specific temp. expands to the specific times or more of the vol. at the room temp., into mold powder at the specific ratio of the powder.

SOLUTION: The heat expansive graphite whose vol. at 400°C expands to ≥ 2 times of the vol. at the room temp., is contained by 0.5-20 wt.% of the mold powder. It is further desirable to add the expansive graphic expanding to ≥ 10 times. At the time of adding this graphite by 1-5 wt.% of the mold powder, the sufficient effect is obtd. The heat expansive graphite is a graphite intercalation compd. in which a laminated material of sufric acid, etc., is inserted between the layers of six-ring polymer. At the time of quickly heating the heat expansive graphite, the laminate is decomposed and expanded in the laminating direction by this gas pressure to remarkably expand the apparent vol. Carbon powder of a carbon black and coke powder, etc., may be further blended and the additional quantity of the whole carbon powder is desirable to 0.5-20% of the mold powder. By this constitution, the entrapment of slag on the surface of a cast slab and the development of the breakout can be prevented.

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